

ENEMION BITERNATUM RAF. (RANUNCULACEAE) IN TEXAS

J.R. Singhurst

Wildlife Diversity Program, Texas Parks and Wildlife Department, Austin, Texas
78704 U.S.A.

J.W. Smith, Jr.

Biological Control Laboratory, Department of Entomology, Texas A&M University,
College Station, Texas 77843 U.S.A.

&

W.C. Holmes

Department of Biology, Baylor University, Waco, Texas 76798-7388 U.S.A.

ABSTRACT

The occurrence of *Enemion biternatum* is documented in Texas. A brief historical account of its mention in literature concerning the state and the plant community in which it occurs is presented.

KEY WORDS: *Enemion*, Ranunculaceae, Texas, biogeography

Enemion biternatum Raf., formerly *Isopyrum biternatum* (Raf.) Torrey & Gray, false rue anemone, is a slender, glabrous perennial herb 10-35 cm tall that has thin fibrous roots and temately decompound leaves. The flowers are white, disposed in panicles or cymes, with each having 5-6 petaloid sepals. Correll & Johnston's (1970) inclusion of *Enemion biternatum* in the *Manual of the Vascular Plants of Texas*, under the name *Isopyrum biternatum*, was based on a specimen collected in the state by Charles Wright. The species is included in the checklists of Hatch *et al.* (1990) and Jones *et al.* (1997). Ford (1997), in his treatment of the genus for the *Flora of North America*, excludes Texas from the distribution of the species. An inquiry, however, to the Gray Herbarium proved that they indeed have the Wright specimen mentioned above. David E. Boufford relayed the following:

"We have one specimen of *Enemion (Isopyrum) bitermatum* from Texas, but it may have been overlooked in the past because it is mounted on a sheet [with another specimen] collected by C.S. Short in Kentucky. We have our specimens in alphabetical order by state, say someone looking through quickly may not have noticed that one of the plants was from Texas. Short's label is the more conspicuous of the two. They were both in Asa Gray's herbarium and it was his practice, to save paper I suppose, to mount two or more plants on a sheet. The specimen from Texas is on the right side, but the label in the lower right corner says only 'Herb. A. Gray. *I. bitermatum* Torr. & Gray, Fl. N. Am.' and there is a little label on top of that with 'Syn. Fl. N. Am.' The only indication of the locality and collector is a packet in the upper right hand corner with 'Texas, Wright' in Gray's handwriting on the outside. There is no other indication of location."

Correll & Johnston (1970) give the distribution as "possibly in n.e. Texas," which seems based upon proximity to areas in Oklahoma and Arkansas where the species is known to occur. However, we believe the specimen to be from southeast Texas because there is no evidence that Wright visited northeast Texas. Wright came to Texas from Natchez, Mississippi. The most traveled and direct route from Natchez to Texas is via the Harrisonburg Road, an extension of the Natchez Trace, to Natchitoches, Louisiana, then via the El Camino Real (known as the Old San Antonio Road in Texas) to either San Augustine or Nacogdoches, Texas. Geiser (1948), in reviewing Wright's activities in Texas, based upon his (Wright's) correspondence to Asa Gray, states that Wright worked as a surveyor in Angelina, Tyler, Jasper, and Newton counties [all in southeast Texas] from 1837 to 1845. There is no mention in the letters of travel to the northeast part of Texas. Gray received his first letter, now lost according to Geiser (1948), from Wright in 1844. While it is possible that Wright could have traveled to northeast Texas prior to 1844, Gray, in a manuscript autobiography of Wright (apparently now lost, but quoted in Geiser 1948), mentions that Wright made:

"his headquarters for two or three years [that is, until about 1840, when he went to Town Bluff, a now deserted village in Tyler County] at a place called Zavalla, on the Neches [in present day Jasper County] . . ."
[Zavalla is actually in Angelina County.]

The only mention of Wright traveling out of the four mentioned counties concerns a business journey he made during the summer of 1844 to Columbus on the Colorado River, Colorado County. In the spring of 1845, Wright accepted a position with Rutersville College in Lagrange, Fayette County. He never returned to east Texas. Since there is no indication that Wright traveled to northeast Texas, it appears probable that the specimen is from southeast Texas (Angelina, Tyler, Jasper, or Newton counties).

That Correll & Johnston (1970) were correct in expecting the species to occur in northeast Texas is borne out by the following recent Singhurst & Smith specimen from Red River County.

Specimens Cited: TEXAS. Red River Co.: [8.2 miles east of the Jct. of FM 1159 and TX Hwy 37 on FM 1159, then north of FM 1159 ca. 0.9 miles] ca. 1.7 air

miles north of Acworth along Greenwood Creek, 16 March 1999, *Singhurst & Smith 7561* (BAYLU, others to be distributed). County and exact location unknown [but probably from Angelina, Tyler, Jasper, or Newton counties), *Wright s.n.* (BAYLU [photo], GH).

In Red River County, the species occurs in the rich humus layer of Roebuck clay soils (Thomas 1977) on relatively flat, moist, and shaded ground adjacent to the base of a steep bluff of 8-15% slope. The hardwood forest present is dominated by *Carya illinoensis* (Wang.) K. Koch (Juglandaceae), *Quercus macrocarpa* Michx., *Q. muhlenbergii* Engelm., *Q. shumardii* Buckl. (Fagaceae), and *Populus deltoides* Bart. ex Marsh (Salicaceae). Subcanopy woody plants include *Sambucus canadensis* L., *Symphoricarpos orbiculatus* Moench. (Caprifoliaceae), *Smilax* spp. (Smilacaceae), and *Cornus drummondii* C.A. Mey (Cornaceae). Common herbaceous species locally associated with *Enemion biternatum* are *Carex* spp. (Cyperaceae) *Erythronium albidum* Nutt., *Polygonatum biflorum* (Walt.) Ell. (Liliaceae), *Impatiens capensis* Meerb. (Balsaminaceae), *Podophyllum peltatum* L. (Berberidaceae), *Parietaria pennsylvanica* Muhl. ex Willd. (Urticaceae), *Polygonum virginianum* L. (Polygonaceae), *Ranunculus* sp. (Ranunculaceae), *Sanicula canadensis* L. (Umbelliferae), *Smallanthus uvedalia* (L.) Mack. ex Small, and *Verbesina virginica* L. (Compositae).

It is expected that the species occurs in similar situations in southeast Texas.

ACKNOWLEDGMENTS

We are thankful for assistance provided by Tom Wendt of TEX/LL, Lindsey Woodruff of BRIT, and Jim Van Kley of ASTC. The report would not have been possible without the assistance of David E. Boufford of GH and the loan of the Wright specimen, which is gratefully acknowledged.

LITERATURE CITED

- Correll, D.S. & M.C. Johnston. 1970. *Manual of the Vascular Plants of Texas*. Texas Research Foundation, Renner, Texas.
- Ford, B.A. 1997. *Enemion* In: Flora of North America Editorial Committee, *Flora of North America*, vol. 3. Oxford University Press, New York, New York. pp. 246-249.
- Geiser, S.W. 1948. *Naturalists of the Frontier*. Southern Methodist University Press, Dallas, Texas.
- Hatch, S.L., K.N. Gandhi, & L.E. Brown. 1990. *Checklist of the Vascular Flora of Texas*. Texas Agric. Exp. Sta. Pub. MP-1655, Texas A&M University, College Station, Texas.

- Jones, S.D., J.K. Wipff, & P.M. Montgomery. 1997. *Vascular Plants of Texas: A Comprehensive Checklist Including Synonymy, Bibliography, and Index*. University of Texas Press, Austin, Texas.
- Thomas, J.R. 1977. Soil survey of Red River County, Texas. United States Department of Agriculture, Soil Conservation Service, Texas Agricultural Experiment Station, Temple, Texas.